Shephard, Burt

From: John Toll <JohnT@windwardenv.com>
Sent: Tuesday, March 19, 2013 4:20 PM
To: 'James McKenna'; Allen, Elizabeth
Cc: Shephard, Burt; Koch, Kristine; Humphrey, Chip; 'jworonets@anchorqea.com'; 'rjw@nwnatural.com'
Subject: RE: FWM questions to ponder

Hi Elizabeth. Thanks for your message. Here's a quick answer to one of your questions. "Negative PRGs" are the consequence of when water exposure alone results in tissue concentrations exceeding a specified target tissue concentration. Talk with you tomorrow, John

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From: James McKenna [mailto:jim.mckenna@verdantllc.com]
Sent: Tuesday, March 19, 2013 3:14 PM
To: 'allen.elizabeth@epa.gov'; John Toll
Cc: 'Shephard.Burt@epa.gov'; 'Koch.Kristine@epa.gov'; 'Humphrey.Chip@epa.gov'; 'jworonets@anchorqea.com'; 'rjw@nwnatural.com'
Subject: Re: FWM questions to ponder

Thanks Elizabeth, we can definitely discuss these issues during tomorrow's meeting along with the proposal to set up a subgroup (which I think is a good idea). Also, please remember to cc Jen on these emails as she is key to helping our team keep track of all the moving parts! I've added her and Bob to this email chain.

Thanks, Jim.

From: Allen, Elizabeth [mailto:allen.elizabeth@epa.gov]
Sent: Tuesday, March 19, 2013 04:58 PM Central Standard Time
To: John Toll <JohnT@windwardenv.com>
Cc: Shephard, Burt <Shephard.Burt@epa.gov>; Koch, Kristine <Koch.Kristine@epa.gov>; Humphrey, Chip <Humphrey.Chip@epa.gov>; James McKenna
Subject: FWM questions to ponder

Hi John,

I've been using the FWM files you provided to calculate some sediment PRGs based on some revised tissue concentrations, which come from the assumptions used in the final BHHRA. I appreciate getting the unlocked versions, if for no other reason than they allow me to utilize the goal seek feature to arrive at target sediment concentrations by essentially setting the target tissue concentration to the desired value by manipulating only the input sediment concentration. I will also say the locked files were very useful in defining what not to screw with, as certainly our initial intention was not to vary from what had been done previously. At some point in the next couple of weeks, I think it would be beneficial for you, Burt, and I (and any other interested parties) to sit down and go over some of this and answer some questions that have arisen, as well as perhaps looking into more clearly looking at some of the predictive limitations of the model. Unfortunately, Burt is out for the rest of the week (well, not unfortunately for Burt!).

As expected, arriving at certain tissue concentrations results in negative sediment values. I suspect this is due to the input sediment concentrations being so low as to be beyond the actual predictive range of the model (outside the linear scale?),or being in a range where water column concentrations overwhelm sediment as the primary source of tissue concentrations, or some combination of the two. Or Factors I've failed to note. In addition, although I've reviewed both the PRG development report and the bioaccumulative modeling report, I am still not clear on how the PRGs for multi-species diets were calculated. The FWM files you provided appear to predict tissue concentrations for carp, smallmouth bass, largescale suckers, and northern pikeminnow (as far as vertebrates go). But my understanding is that the FWM

was used for ***all*** organochlorines. Thus, how were tissue concentrations, and thus PRGs, calculated for crappie and bullhead?

Another curiosity I've noted is that for whatever sediment PCB concentration is input, the predicted tissue concentrations in carp are roughly half those in smallmouth bass. However, this seems the opposite of the site data, where PCB concentrations in carp were consistently higher than in bass. I'm not sure of the what the reason is for this observation, perhaps the area for which concentrations are averaged. But it does seem a concern when we try and evaluate less than harbor-wide spatial scales.

Anyway, some initial topics for discussion…

Elizabeth